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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,358	10/22/2003	Zhiping Shan	1094-36	4952

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DILWORTH & BARRESE, LLP
333 EARLE OVINGTON BLVD.
UNIONDALE, NY 11553

EXAMINER

JOHNSON, CHRISTINA ANN

ART UNIT PAPER NUMBER

1725

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,358

Applicant(s)

SHAN ET AL.

Examiner

Christina Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 39-55 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-38 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-25 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/27/05; 2/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-38, drawn to a catalyst composition, classified in class 502, subclass 64.
 - II. Claims 39-55, drawn to a hydrocarbon conversion process, classified in class 585, subclass 100+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of use, such as a catalyst for the reduction of nitrogen oxides.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and vice versa, restriction for examination purposes as indicated is proper.

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5. During a telephone conversation with Mr. Adrian Calderone on June 15, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 39-55 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1-12 and 16-25 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 01/17901.

WO 01/17901 discloses an inorganic oxide that includes both mesopores and micropores, which is prepared by heating a mixture of (1) an inorganic oxide in water and (2) an organic material, and optionally a templating material and a preformed crystalline zeolite (page 4). Suitable organic materials include glycol or members of the

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group consisting of triethanolamine, sulfolane, tetraethylene pentamine, and diethylglycol dibenzoate (pages 4-5). The inorganic oxide material may further contain additional metals such as titanium, vanadium, zirconium, gallium, manganese, zinc, iron, and aluminum (page 9). Refer also to page 13. The material generally has a surface area of between 400 and 1200 m²/g (page 9).

The reference discloses specifically the preparation of a mesoporous material with zeolite beta crystals (page 18-19, Example 8). In the example, calcined zeolite beta is suspended in water with TEOS, triethanolamine, and TEAOH which are mixed to form a gel. The gel is dried at 100 degrees C and calcined at 600 degrees C. The beta-TUD-1 product has the claimed XRD pattern. Refer to Figure 7b. With reference to claim 12, "calcined zeolite beta" is considered to meet the required pre-treated zeolite.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by WO 01/17901.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,762,143. Although the conflicting claims are not identical, they are not patentably distinct from each other.

US 6,762,143 claims a material which comprises a zeolite and a porous non-crystalline inorganic oxide which includes micropores and mesopores, wherein an XRD pattern of said inorganic oxide includes one peak in two-theta between 0.5 and 2.5 degrees and wherein the mesopores are interconnected mesopores (claim 1). The difference between the instant claims and those of '143 is that '143 does not claim a two-theta range of between 0.3 and 3 degrees, although the ranges overlap. With respect to the encompassing and overlapping ranges previously discussed, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time of invention to select the portion of the prior art's range which is within the range of the applicants' claims because it has been held prima facie case of obviousness to select a value in a known range by optimization for the results. *In re Boesch*, 205 USPQ 215. Additionally, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ.

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11. Claims 12 and 17-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,814,950. Although the conflicting claims are not identical, they are not patentably distinct from each other.

US 6,814,950 claims a process for producing an inorganic oxide that contains micropores and mesopores comprising heating a mixture comprising water, an inorganic oxide, a crystalline zeolite in finely divided form, and at least one organic compound selected from the group consisting of triethanolamine, sulfolane, tetraethylpentamine, diethylglycoldibenzoate, and a glycol, said heating being to time and temperature to produce an inorganic oxide which contains both micropores and mesopores (claim 1). With respect to the language of the instant claims, it is the position of the examiner that the preparation of a crystalline zeolite in finely divided form is considered to meet the required pre-treated zeolite as no specific pre-treatment method is required. Thus the instant claims are encompassed by those of '950.

Allowable Subject Matter

12. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 26-38 are allowed.

14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a method of making a catalytic

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material wherein the zeolite is a lamellar zeolite and the pretreatment includes delamination or intercalation of the lamellar zeolite , in combination with the other features instantly claimed.


Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christina Johnson
Patent Examiner
Art Unit 1725

4/27/05

CAJ
June 27, 2005